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S/2909/62/000/006/C082/0093

ACCESSION NR: AT3001862

AUTHORS: Voinov, A.I.; Fastova, K.N.; Zaytsev, V.A.; Chernov, N.P. 72

TITLE: Investigation of the effect of antidetonation additives on the processes that precede detonation in an engine

SOURCE: AN SSSR, Institut dvigateley. Trudy, no. 6, 1962, 82-93

TOPIC TAGS: detonation, knock, antidetonation, antiknock, Fe, Cu, penta-carbonyl, dicyclopentadiene, dicyclopentadienyl, pre-ignition, self-ignition, cold flame, mixture, rich, lean

ABSTRACT: This paper describes an experimental investigation of the effects of various metal-organic antidetonation (antiknock) additives on the various stages of the pre-combustion process in an engine intended to determine the distinctive characteristics of the mechanism of their action. The test equipment and methodology are described, and the processing and evaluation of the test data are detailed. It is established that, for any given level of antiknock effectiveness, the various metal-organic compounds tested affect the other stages of the pre-combustion reaction differently. (a) Tetraethyl (TE) and "ferrocene" or iron dicyclopentadienyl (FC) do not exert any noticeable effect on the inception of the cold-flame

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oxidation and, basically, act only on the development of the second stage of the pre-combustion process by shifting the boundary of the self-ignition of the hot combustion toward the side of higher temperatures and pressures. (b) Iron pentacarbonyl $[(FeCO_5)]$ (hereinafter: IP) and $[(C_8H_{16})_5Fe(CO)_5]_3$ (hereinafter: IIP) inhibit sharply the initial stages of the pre-combustion reaction, shift the boundary of the formation of the cold flame toward higher temperatures and pressures, and reduce it in size so that in rich mixtures there is no region of cold-flame oxidation at all. The entire character of the pre-combustion oxidation is altered: The hot-explosion region is shifted toward higher pressures and temperatures, with the minimums appearing in the temperature range of 760 to 800°K. c) $C_{10}H_{16}N_2O_2Cu$ (hereinafter: III) appears to be somewhat intermediate between TE and IP, namely, it delays the beginning of the cold-flame oxidation, but to a smaller degree than IP, and gives the hot-detonation boundary a form that is similar to that afforded by IP (with a pressure minimum for rich mixtures); however, the detonation boundary lies much lower than with IP and, for lean mixtures, it may even be lower than for pure gasoline. Enrichment of the mixture with IP leaves the detonation boundary virtually unchanged, whereas with pure gasoline and all other additives it is displaced toward lower pressures. The peculiarities of a metal-organic antiknock additive are not determined by the presence in it of a specific metal. TE and FC contain different metals, but act almost identically on

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ACCESSION NR: AT3001862

the pre-ignition processes, whereas FC and carbonyl products of Fe (IP and IP) act distinctly differently. It is concluded that the self-ignition tendency of a fuel-air mixture not only is not identical with its tendency toward detonation, but is not even single-valuedly related to it. Orig. art. has 6 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 11Apr63

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NO REF SOV: 005

OTHER: 002

Card 3/3

FASTOVETS, F. N.

AID P - 721

Subject : USSR/Electricity
Card 1/1 Pub. 29 - 14/26
Author : Fastovets, F. N., Eng.
Title : A convenient placing of controlling push buttons
Periodical : Energetik, 9, 19-20, S 1954
Abstract : The author briefly describes cases in which the accumulation of conducting dust causes self-switching of electric motors. He submits for discussion methods of eliminating this possibility.
Institution : None
Submitted : No date

Fastovets, F.N., inzhener.

Group speed regulator for predetermined conditions. Log.prom.15
no.2:44-47 F '55: (MIRA 8:4)
(Electric machinery) (Tanning)

FASTOVETS, L. D.

FASTOVETS, L. D.: "Anatomical principles for isometry and anisometry."
Dnepropetrovsk State Medical Inst. Dnepropetrovsk,
1956. (DISSERTATION FOR THE DEGREE OF DOCTOR IN
MEDICAL SCIENCE).

Knizhnaya letopis
No. 15, 1956. Moscow.

SHIMANSKIY, N.K., kand.biologicheskikh nauk; LOSHAK, I.F.; FACTOVETS, L.S.

Effect of fertilizers on the yield and oil content of sunflower
seeds. Agrobiologiya no.6:849-853 N-D '61. (MIRA 15:2)

1. Vsesoyuznyy selektsionno-geneticheskiy institut, Odessa.
(Sunflower seed)

KHRIPIN, A.G., inzh.; BRAGINSKIY, M.A., inzh.; PASTOVETS, O.S., inzh.;
KARPUKHIN, G.G., inzh.; TERESHCHENKO, F.P., inzh.; LIVYY, G.V.,
kand.tekhn.nauk

Drying of chrome leather under dynamic conditions. Izv.vys.
ucheb.zav.; tekhn.prom. no.6:67-76 '59.
(MIRA 13:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-
obuvnoy promyshlennosti (for Khripin, Braginskiy, Pastovets,
Livyy, Karpukhin). 2. Kiyevskiy kozhevennyy kombinat (for
Tereshchenko).

(Leather--Drying)

KHRIPIN, A.G., inzh.; BRAGINSKIY, M.A., inzh.; FASTOVETS, O.S., inzh.;
KARPUKHIN, G.G., inzh.; TERESHCHENKO, F.P., inzh.; LIVYY, G.V., kand.
tekhn.nauk.

Drying of chrome leather in the dynamic state. Report No.2.
Izv. vys.ucheb.zav.; tekhn.prom. no.2:62-70 '60.

(MIRA 13:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti (for Khripin, Braginskiy, Fastovets & Karpukhin).
2. Kiyevskiy kozhevennyy kombinat (for Tereshchenko).
3. Ukrainskiy nauchno-issledovatel'skiy institut kozhevennoy promyshlennosti (for Livyy).

(Leather--Drying)

VOROB'YEVA, M.D., tekhnik; DUSHIN, B.M., inzh.; FASTOVETS, O.S., inzh.

New developments in the processing of split leather. Kozh.-obuv.
prom. 2 no. 12:32-33 D '60. (MIRA 14:1)
(Leather)

LIVYY, G.V., kand. tekhn. nauk; KURBANOV, A.I., inzh.; FRAGINSKIY, M.I., inzh.;
KARPUKHIN, G.G., inzh.; KALININ, A.I., inzh.; ABRAMSKAYA, L.B., inzh.;
BOZHENOVSKAYA, M.G., inzh.; TSEKHOMENKO, F.P., inzh.; Prinizali
uchastiyu: OLEYNIK, N.N.; ZHIGABA, T.T.; GORONOVSKAYA, M.A.; SHAVZIN,
A.I.; GERTSVOL'F, B.S.

Unit for dynamic drying of ... Report No. 1. Nauch.--
Issledovaniya Ukr NIIKP no. 1314-1968

(MIRA 18:2)

LIVYY, G.V., kand. tekhn. nauk; KAZARINA, N.N., inzh.; GIL'MAN, E.A., inzh.;
FASTOVETS, O.S., inzh.; MOROZYUK, N.I., inzh.; LITVINOV, Sh.I.,
inzh.; SAGAYDACHNYY, V.G., inzh.; BALAYEV, Yu.V., inzh.;
FITSA, A.S., inzh.

Manufacture of leather for lining and accessories from the
face split of DOL type pigskins. Kozh.-obuv. prom. 7 no.6:
29-32 Je '65. (MIPA 18:8)

FASTOVETS, R.D.

Buried suture of the bile duct following choledochotomy. Sov.med.
28 no.7:63-68 JI '65. (MIRA 18:8)

1. Kafedra obshchey khirurgii (zav. - dotsent N.V.Gerasimov)
Saratovskogo meditsinskogo instituta.

FASTOVSKIYA, E. I.

"Characteristics of the Epidemiology of Malaria in Belorussian SSR During the War and in the First Postwar Years." Sub 29 War 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

FASTOVSKAYA, E.I.

Scientific session of the Department of Hygiene, Microbiology and Epidemiology of the Academy of Medical Sciences of the USSR on sanitary and anti-epidemic protection in the construction area of the Main Turkmen Canal.

Med.paraz.i paraz.bol. no.2:186-189 My-Ap '53.

(MLRA 6:6)

(Main Turkmen Canal Region--Public health)

An account of a meeting at Ashkhabad on 17-18 Nov 52, attended by 594 persons. The following subjects were discussed: malaria, dysentery, V.D.Timakov, the effects of a hot climate, the danger of the introduction and spread of papatacci fever at the site of construction (P.A. Petrisheva), the advisability and possible dangers of carrying out prophylactic inoculations against leishmaniasis, measures for the control of mosquitoes, ixodid ticks and fleas, etc.

257Th7

1. PASTOVSKAYA, E. I.
2. USSR (600)
4. Main Turkmen Canal Region - Malarial Fever
7. Role of the medical service personnel in the control of malaria on the Main Turkmen Canal, Fel'd. 1 akush., no. 4, 1953. (p. 18)

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl. "

LYSENKO, A.Ya.; GOZODOVA, G.Ye.; FASTOVSKAYA, E.I.; ZAL'NOVA, N.S.;
CHURNOSOVA, A.A.

Seeking methods for radical chemical prevention and cure without recurrence of tertian malaria with short and long incubation periods. Report no.6: Results of an investigation of tolerance to the new antimalarial drug quinocid. Med. paraz. i paraz. bol. 24 no.2:147-154 Ap-Je '55. (MLRA 8:10)

1. Iz sektora eksperimental'noy parazitologii Instituta malyarii meditsinskoj parazitologii i gel'mintologii Ministerstva zdra-vookhraneniya SSSR (dir. instituta-Prof. P.G.Serpiyov, zav.sek-torom prof. V.P.Pod'yapol'skaya) i Stalinabadskoy gorodskoy sanitrano-epidemiologicheskoy stantsii (glavnyy vrach stantsii Kh.V.Vakhidov)

(QUINOLINES, effects,
aminoquinoline deriv.tolerance)

FASTOVSKAYA, E.I.; LYSENKO, A.Ya.; SHCHELKUNOVA, F.N.

Investigations of methods of radical chemoprophylaxis and of complete cure of tertian malaria with short and long incubation periods.
Report no.7: Results of using quinocide in the treatment of tertian malaria with various possibilities of reinfection. Med.paraz. i paraz. bol. 25 no.3:222-226 J1-S '56. (MIRA 9:10)

1. Iz otdeleniya epidemiologii malyarii i organizatsii bor'by s malyariy i drugimi parazitarnymi zabolevaniyami Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdavookhra-neniya SSSR (dir. inst. prof. P.G.Sergiyev, zav. otdelom - dotsent M.G.Rashina)

(ANTIMALARIAIS, therapeutic use,
quinocide in tertian malaria (Rus))

FASTOVSKAYA, M.I.

Three years of work of the epidemic control squad of the Ministry of Public Health of the U.S.S.R. in eliminating malaria in Tajikistan. Med.paraz. i paraz.bol. 26 no.1:121-122 Ja-F '57.

(MIRA 10:6)

(TAJIKISTAN--MALARIA--PREVENTION)

FASTOVSKAYA, E.I.; L'VOV, D.K.; LOPATIN, A.N.

Epidemiological data on tick-borne encephalitis in the construction zone of the Krasnoyarsk Hydroelectric Power Station. Med.para's. i paraz.hol. 27 no.1:14-20 Ja-F '58. (MIRA 11:4)

1. Iz otdeleniya epidemiologii i organizatsii bor'by s malyariyey i drugimi parazitarnymi zabolevaniyami Instituta malyarii meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (dir. instituta - prof. P.G.Sergiyev, zav. otdeleniyem M.G.Bashina)
(ENCEPHALITIS, epidemiology
tick-borne encephalitis in construction zone, statist.
(Rus))

FASTOVSKAYA, E. I., CHURNOSOVA, A. A., SERGIYEV, P. G., STAVROSKAYAY, V. I.
LYSENKO, A. L., BRAUSE, M. B., GLADKIKH, V. F., SHUKOVA, T. A.,
GAZODOVA, G. YE., ZAL'NOVA, N. S., MASHLOVSKIY, SH. D.

"Quinocide and the prospects of acceleration of the malaria
eradication rate in the USSR."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

LYSENKO, A.Ya.; KALMYKOV, Ye.S.; FASTOVSKAYA, E.I.; BERDYEV, Kh.B.;
IVANENKO, A.K.; LYAPIN, P.D.

Principal results of three years' work for the extermination
of malaria as a mass disease in the Tajik S.S.R. Sbor. rab.
po mal. i gel'min. no.2:5-19 '59. (MIRA 15:3)
(TAJIKISTAN--MALARIA)

FASTOVSKAYA, E.I.; IVANENKO, A.K.

Comparative evaluation of various methods for the detection
of persons sick with malaria in Tajikistan. Sbor. rab. po
mal. i gel'min. no.2:21-24 '59. (MIRA 15:3)
(TAJIKISTAN---MALARIA)
(MEDICAL SCREENING)

FASTOVSKAYA, E.I.

Results of three years' work in clearing up malaria centers
in the mountain-river zone of the Gissar Range Region.
Sbor. rab. po mal. i gel'min. no.2:25-31 '59. (MIRA 15:3)
(GISSAR RANGE REGION—MALARIA)

FASTOVSKAYA, E.I.; LULIKOVA, M.Ya.

Results of the restriction of DDT spraying to villages in
malaria control within the border region of southern
Tajikistan (Kirovabad District). Sbor. rab. po mal. i gel'min.
no.2:49-56-'59. (MIRA 15:3)

(KIROVABAD DISTRICT—MALARIA)
(DDT (INSECTICIDE))

BABENKO, L.V.; BUYANOVA, O.F.; KELLINA, O.I.; LEYKINA, Ye.S.; RAZUMOVA, Ye.P.;
FASTOVSKAYA, E.I.; CHALAYA, L.Ye.; SHIPITSINA, N.K.

All-Union Conference on the Control of Parasitic Diseases.

Med.paraz. i paraz.bol. 28 no.3:364-373 My-Je '59.

(MIRA 12:9)

(PARASITOLOGY--CONGRESSES)

FASTOVSKAYA, E. I.

Method for an epidemiological study of pseudofocal tick-borne encephalitis. Med. paraz. i paraz. bol. no.4:401-406 '61.
(MIRA 14:12)

1. Iz otdela epidemiologii Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye. I. Martsinovskogo Ministerstva zdravookhraneniya SSSR (dir. - instituta - prof. P. G. Serg'yev, zav. otdelom M. G. Rashina)

(ENCEPHALITIS)

FASTOVSKAYA, E.I. (Moskva)

Prevention of tick-borne encephalitis. Fel'd. i akush. 26 no.9:
42-45 S '61. (MIRA 14:10)
(ENCEPHALITIS) (TICKS AS CARRIERS OF DISEASE)

FASTOVSKAYA, E.I.; NIKIFOROV, L.P.; NAUMOV, R.L.

Influence of the terrain on tick-borne encephalitis morbidity
in Krasnoyarsk Territory. Med. paraz. i paraz. bol. 32 no.3:
280-283 My-Je'63 (MIRA 17:2)

1. Iz epidemiologicheskogo otdela (zav. - prof. N.N. Dukhanina)
i entomologicheskogo otdela (ispolnyayushchiy obyazannosti za-
veduyushchego - prof. V.P. Derbeneva-Ukhova) Instituta meditsin-
skoy parazitologii i tropicheskoy meditsiny imeni Ye.I. Martsinov-
skogo (dir. - prof. P.G. Sergiyev) Ministerstva zdravookhrane-
niya SSSR.

BULANZHE, I.N., kand.khimicheskikh nauk,dotsent; PRININALA UCHASTIYE: Fastovskaya,
P.I.

Studying the properties of phosphate and sulfide films obtained
with the method of cold parkerizing and sulfidization of the
surfaces of steel parts. Izv.vys.ucheb.zav.; tekhn.prom. no.1:
127-133 '62. (MIRA 15:2)

1. Kiyevskiy tekhnologicheskiy institut legkoy promyshlennosti.
Rekomendovana kafedroy obshchey i analiticheskoy khimii.
(Protective coatings—Testing)

DUBOVYY, Ye. D., prof.; OKS, A. A., prof; BUCHINSKAYA, M. P.; VORONENKO, T. V.;
DEMIDAS, V. V.; PASTOVSKAYA, R. M. (Odessa)

Treatment of thyrotoxicosis with radioactive iodine. Probl. endok.
i gorm. no.6:50-56 '61. (MIRA 14:12)

1. Iz kafedry rentgenologii i radiologii (zav. - prof. Ye. D. Dubovyy)
i kafedry fakul'tetskoy u gosital'noy terapii (zav. - prof. A. A. Oks)
Odesskogo meditsinskogo instituta (dir. - zaslushennyy deyatel' nauki
prof. I. Ya. Deyneka)

(IODINE—ISOTOPES)
(THYROID GLAND—DISEASES)

SKVORTSOVA, L.I.; KRAKHMAL'NIKOVA, G.Kh.; FASTOVSKAYA, R.M.

Shereshevskii's syndrome observed in patients with toxoplasmosis.
Probl. endok. i gorm. 10 no.6:60-61 M-D '64. (MIRA 18:7)

1. Kafedra infektsionnykh bolezney (zav. - prof. L.K.Korovitskiy).
kafedra akusherstva i ginekologii lechebnogo fakul'teta (zav. -
prof. A.I.Malinin), kafedra gospital'noy terapii pediatricheskogo
i stomatologicheskogo fakul'tetov (zav. - prof. A.A.Oks) Odesskogo
meditsinskogo instituta imeni Pirogova i 1-ya Odesskaya gorodskaya
infektsionnaya bol'nitsa (glavnyy vrach L.T. Zhidovlenko).

FASTYKOVSKAYA, Ye.D.

Mammography in the diagnosis of breast cancer. Vop.onk. 7
no.12:47-51 '61. (MIRA 15:1)

1. Iz kafedry rentgenologii i radiologii (zav. - prof. A.I.
Dombrovskiy). Adres avtora: Novo-Kuznetsk, Kemerovskoy obl.,
Gosudarstvennyy institut dlya usovershenstvovaniya vrachey.
(BREAST--CANCER) (BREAST--RADIOGRAPHY)

NIKIFOROV, L.P.; FASTOVSKAYA, Y.I.; LVOV, D.K.; BEKLEMISHEV, V.N. [deceased]

Quantitative indicators in the epizootology and epidemiology of tick-borne encephalitis. J. hyg. epidem. (Praha) 8 no.2:221-228 '64.

1. Martsinovsky Institute of Medical Parasitology and Tropical Medicine, Ministry of Health of the U.S.S.R., Moscow.

VAKSMAN, I.; ~~FASTOVSKIY~~, A.I.

Timbering jacket. Mast. ugl. 5 no.5:23 My '56.
(Kuznetsk Basin—Mine timbering)

(MLRA 9:8)

10:26-27 0 '57.
FASTOVSKIY, A.I., inzh.; TERESHCHENKO, P.M., inzh.

Using embedded anchor bolts. Shakht.stroi. no.10:26-27 0 '57.
(MIRA 10:12)

(Kusnetsk Basin--Mine roof bolting)

FASTOVSKIY, A.I.

In the Technical and Economic Council. Tekh.-ekon.biul. no.1/2:
56-58 Jan-F '59. (MIRA 12:4)
(Kuznetsk Basin--Economic Councils)

FAS TO U.S.K.Y., A.S.

25(5)	PHASE I BOOK EXPLOITATION	SOV/2581
	Vesilov, P. S., Yu. A. Gaydukov, S. Ye. Karmilov, (Chief) V. O. Kotorovich, G. A. Pishchulin, (A.S. Sartin) A.S. Tolstykh, and A.S. Piorovskiy	
	Barometer, robot, mashinostrotel'nykh zavodov (Uniform Work of Machine-Manufacturing Plants) Moscow, Mashgis, 1958. 171 p. Errata slip inserted. 4,000 copies printed.	
	Reviewer: A. K. Bondarenko, Engineer, Ed.: V. A. Letenko, Candidate of Economic Sciences, Tech. Ed.: V. D. El'kind, Managing Ed. for literature on the Economics and Organization of Production (Mashgis); T. D. Saksaganakiy.	
	PURPOSE: This book is intended for engineering and technical personnel in machine-manufacturing plants.	
	COVERED: This book discusses the national economic importance of uniform operation of plants according to a schedule, and points out planning problems that should be solved to permit work uniformity in manufacturing establishments. It defines organizational and technical prerequisites for uniform work, shows the influence of financial agencies of establishments on production uniformity, and describes methods of assuring work uniformity. The last two chapters are devoted to work practices at the Moscow "Elektrochetnik" Plant and the Pervyy Moskovskiy chasovyy zavod (First Moscow Watch and Clock Plant). No personalities are mentioned. There are no references.	
	Ch. IV. Setting Standards for the Length of the Production Cycle as a Factor Contributing to Uniform Operation of an Establishment (A.S. Tolstykh)	76
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	2. Establishing standards for the production cycle	78
	3. Calculation and analysis of the length of the production cycle	94
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	2. Establishment of standard banks in production	116
	3. Introduction of progressive standards for material expenditures and imposition of limits on material requirements	119
	4. Control of the supply plan fulfillment	121
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	AVAILABLE: Library of Congress	
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FASTOVSKIY, A.S., inzh.

Improvement of methods for evaluating labor productivity. Vest.
elektroprom. 32 no.10:51-54 O '61. (MIRA 14:9)
(Electric industries—Labor productivity)

<p>FASTOVSKIY, B.</p>		<p>PROCEDURES AND PROPERTIES WORK</p>	
<p>S</p>		<p>7</p>	
<p>The Utilization of Bessemer Steel for Certain Rolled Sections and Parts. S. Lashchikov and B. Fastovskiy, (Stal, 1940, No. 1, pp. 22-26). (In Russian). In the introduction it is pointed out that, although there are large deposits of low-phosphorus ores in the U.S.S.R. suitable for working up into Bessemer steel, the latter has so far been utilized only for the production of rails. The present investigation was designed to study the possibilities of rolling Bessemer steel into various sections, as it is pointed out that this steel is superior in many respects to open-hearth steel. In this, the first part of the article, characteristics relating to some experimental heats of Bessemer steel produced at the Potrovskiy and the Dzerzhinskiy works are described. In both cases the metal blown was characterized by a high silicon content (1.8-2.8%). The deoxidation practice is described and the effect of final deoxidation with aluminum in the ladle on the oxygen content is shown by analyses from a number of heats. The metal was top-poured into ingot moulds. The pouring temperatures and rates are given and the appearance and composition of the ingots are described. The surface of the ingots was improved by placing a sheet-iron sleeve on the bottom of the moulds, whilst at the Dzerzhinskiy works two or three buckets of saw-dust were also added.</p>			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>REGIONAL SYMBOLS</p>		<p>CLASSIFICATION</p>	
<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>		<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>	

PASTOROVICH		1ST AND 2ND COPIES	
3		12	
<p>Utilization of Bessemer Steel for some Sections and other Products. S. Loshchilov and B. Pastorskiy. (Stal, 1940, No. 2, pp. 17-32). (In Russian). Experience in the use of Bessemer steel for the rolling and drawing of wire, the rolling of round rod for bolts, the rolling of angles, the production of corrugated sheet and tinplate, spool, blanks and strips for welded tubes is described. In many cases satisfactory results were obtained, whilst in others they could have been obtained by suitable conditions. The ingot quality should be improved, and in this connection converter practice is briefly discussed.</p>			
ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION			
FROM 1710110		FROM 1710110	
1710110		1710110	

PASTOVSKIY, B.G., kandidat tekhnicheskikh nauk.

Econenical rolled shapes for industry and constructions. Stal' 16 no.3:
224-229 Mr '56. (MLRA 9:7)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Rolling (Metalwerk)) (Steel, Structural)

CHIZHIKOV, Yuriy Mikhaylovich, ~~PASTOVSKIY, B.G.~~, red.; GOLYATKINA, A.G.,
red.izd-va.; BEKKER, O.G., tekhn.red.

[Rolling mill practice] Prokatnoe proizvodstvo. Izd. 2., perer.
i dop. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi
metallurgii, 1958. 612 p. (MIRA 11:9)
(Rolling mills)

PANASENKO, Fedor Lavrent'yevich; ~~FASTOVSKIY, B.G.,~~ red.; GORDON, L.M.,
red.isd-va; ISLENT'YEVA, P.G., tekhn.red.

[Rolling and heat treatment of thick sheets] Prokatka i termi-
cheskaia obrabotka tolstyykh listov. Moskva, Gos. nauchno-tekhn.
isd-vo lit-ry po chernoi i tavetnoi metallurgii, 1959. 152 p.

(MIRA 12:2)

(Rolling (Metalwork)) (Sheet steel--Heat treatment)

FASTOVSKIY, B.G.

Economical shapes for rolled products. Metallurg 5 no.2:
23-25 F '60. (MIRA 13:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Rolling(Metalwork))

FASTOVSKIY, B.G., kand.tekhn.nauk

Specialization of rolling mills. Stal' 21 no. 1:79-81 Ja '61.
(MIRA 14:1)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metal-
lurgii.

(Rolling mills)

FASTOVSKIY, B.G.; FUNDE, A.N.

Manufacture and use of economical hot-rolled sections.
Metallurg 7 no.8:19-23 Ag '62. (MIRA 15:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Rolling (Metalwork))

FASTOVSKIY, B.G., kand.tekhn.nauk

Prospects for the production of hot-rolled economical sections.
Stal' 23 no.5:435-438 My '63. (MIRA 16:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Rolling (Metalwork))

PASTOVSKIY, I.

MEDVEDEV, Yul.: PASTOVSKIY, I.

In the world of wild radiowaves. IUn. tekhn. no.4:33-37 Ap '57.
(Radio--Interference) (MIRA 10:6)

FASTOVSKIY, Izya Abramovich; LYUSTBERG, V.F., inzh., ved. red.;
EL'KIN, A.Yu., inzh., red.; PONOMAREV, V.A., tekhn. red.

[AP-28 interference analyzer]Analizator pomekh AP-28. Moskva,
Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958. 21 p.
(Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema
36. No.P-58-101/14) (MIRA 16:3)
(Radio measurements) (Interferometer)

FASTOVSKIY, Izya Abramovich; FURMANOV, Il'ya Mikhaylovich; SHTEYNBOK,
G.Yu., inzh., ved. red.; SOSNOVSKIY, A.A., inzh., red.; PONOMAREV,
V.A., tekhn. red.

[Specialized radio interference measuring devices] Spetsial'nye iz-
meriteli radiopomekh. Moskva, Filial Vses. in-ta nauchn. i tekhn.
informatsii, 1958. 45 p. (Peredovoi nauchno-tekhnicheskii i pro-
izvodstvennyi opyt. Tema 36. No.P-58-21/6) (MIRA 16:3)
(Radio measurements) (Radio—Interference) (Interferometer)

6(4)

PHASE I BOOK EXPLOITATION

SOV/2529

Fastovskiy, Izya Abramovich and Il'ya Mikhaylovich Furmanov

Poisk istochnikov industrial'nykh radiopomekh i ikh issledovaniye (Detection and Investigation of Industrial Sources of Radio Interference) Leningrad, Sudpromgiz, 1959. 60 p. 26,200 copies printed.

Resp. Ed.: A. Ye. Vorontsov; Ed.: B. I. Leonova; Tech. Ed.: L. M. Shishkova.

PURPOSE: This booklet is intended for engineers and technicians concerned with industrial radio interference.

COVERAGE: The authors discuss the purpose, fields of application, characteristics and methods of operation of special devices for analyzing radio interferences. They describe a radio interference detector, a television interference meter, special instrument generators, a spectrum analyzer and probability distribution analyzers. No personalities are mentioned. There are 6 references: 5 Soviet and 1 German.

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Detection and Investigation (Cont.)

SOV/2529

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9(6)

PHASE I BOOK EXPLOITATION

SOV/2240

Fastovskiy, Izya Abramovich, and Il'ya Mikhaylovich Furmanov

Tipovyye pribory dlya izmereniya industrial'nykh radiopomekh (Standard Instruments for Measuring Industrial Radio Interferences) Leningrad, Sudpromgiz, 1959. 119 p. 41,200 copies printed.

Resp. Ed.: A. Ye. Vorontsov; Ed.: D. P. Smirnova; Tech. Ed.: L. M. Shishkova.

PURPOSE: This booklet is intended for electrical and radio engineers dealing with problems of suppression of radio interferences.

COVERAGE: The authors describe electrical circuits and standard interference meters used for determining the intensity of radio interferences. They discuss basic characteristics of interference-measuring devices. They also explain methods of measuring voltages and interference levels. The authors also discuss problems of calibration and of checking the accuracy of interference meters used in the frequency range between 0.15 and 1000 mc and present their characteristics. Devices discussed in this booklet were developed by TsLIR - Tsentral'naya laboratoriya po bor'be s industrial'nymi radiopomekhami (Central Laboratory for Combatting Industrial Radio Interferences). No personalities are mentioned. There are 13 references.

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AVAILABLE: Library of Congress

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JP/1sb
10-9-59

88221

S/110/60/000/010/010/014
E041/E455

6.9460

AUTHOR: Fastovskiy, I. A., Engineer

TITLE: The Method of Measuring and Testing the Basic Parameters of Noise Meters

PERIODICAL: Vestnik elektropromyshlennosti, 1960, No.10, pp.55-57

TEXT: In meters for measuring radio noise, four parameters are of interest: the charge time τ_z , the discharge time τ_r , the ballistic time constant of the indicator τ_{Π} and the pulse characteristic $K(F)$. The measurement of τ_{Π} is best carried out in the following way. A pulse of amplitude I and duration δ is applied to the circuit. The deviation α of the instrument is noted. τ_{Π} may be calculated from the value of α_{\max} as given by

$$\alpha_{\max} = 0.354 \frac{\delta}{\tau_{\Pi}} \alpha_M \quad (1)$$

The recommended circuit for this measurement (that of Engineer A.G.Yakovlev) is given. τ_z may be measured by the usual method

Card 1/2

88221

S/110/60/000/010/010/014
E041/E455

The Method of Measuring and Testing the Basic Parameters of Noise Meters

of evaluating the time required for a function to reach 63.2% of its maximum value; a suitable circuit is given. The same method may also be used for measuring τ_r . The pulse characteristic may be taken by using the conventional arrangement in which a variable pulse repetition frequency is supplied to the meter and its indication noted. There are 6 figures.

SUBMITTED: February 15, 1960

Card 2/2

FASTOVSKIY, I.A.

Operation of an inertial detector in the presence of impulses with complex shapes. Radiotekhnika 16 no.5:51-59 My '61. (MIRA 14:6)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva
radiotekhniki i elektrosvyazi.
(Radio detectors)

FASTOVSKIY, I.A.

Performance of a magnetoelectric device under the action of
exponential pulses. Izv.tekh. no.4:40-43 Ap '62. (MIRA 15:4)
(Pulse techniques (Electronics))

PASTOVSKIY, I.A.

An inertial voltmeter subject to the action of a random sequence of impulses. Radiotekhnika 18 no.2:70-80 F '63.

(MIRA 16:4)

1. Deystvitel'nyy chlen Nauchno-Issledovatel'skogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.
(Radio measurements)

FASTOVSKIY, Izya Abramovich; KNELLER, I.A., otv. red.; TSEYTLIN,
F.G., red.

[Radio interference measuring apparatus] Apparatura dlia
izmereniia radiopomekh; informatsionnyi sbornik. Moskva,
Sviaz', 1965. 56 p. (MIRA 18:5)

BELOTSERKOVSKIY, Grigoriy Dentsionovich; KALANTAROV, M.N., inzh.,
retsensent; FASTOVSKIY, I.A., kand. tekhn. nauk,
retsensent; OKUN', Ye.L., inzh., nauchn. red.; KVOCHKINA,
G.P., red.

[Oscillatory circuits and filters] Kolobatel'nye kontory i
fil'try. Leningrad, Sudostroenie, 1965. 135 p.
(MIRA 18:8)

FASTOVSKIY, I., kand.tekhn.nauk

New developments in radio interference measuring techniques.

Radio no.10:30-31 0 '65.

(MIRA 18:12)

42137

S/203/62/002/002/013/017
1046/1236

9.6130

AUTHORS: Nalivayko, V.I., Tyurmin, A.V. and Fastovskiy, U.V.

TITLE: Field proton magnetometer Π M-5 (PM-5)

PERIODICAL: Geomagnetizm i aeronomiya, v.2, no. 2, 1962, 343-347

TITLE: The signal/noise ratio on the output of the new two-cycle paraphase amplifying circuit (see diagram) is 25:1 for a noise level that is approximately equal to the signal at the input; the total amplification factor $K=40,000$; the transmission band $\Delta F_{0.7} = 150$ cycles; wider range can be obtained by simple replacement of capacitors. The total error in measurements for 60,000 γ fields (γ the gyromagnetic ratio of the proton) is $\Delta T/T = 4.08 \cdot 10^{-3}\%$, or $\pm 2.5 \gamma$. General principles of the proton magnetometer operation are cited after Packard and Varian (Ref.1: M. Packard, R. Varian. Phys. Rev., 1954, 93, 941). There are 4 figures. 4X

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of the Terrestrial Magnetism, the Ionosphere and Propagation of Radiowaves AS USSR)

SUBMITTED: January 16, 1962

Card 1/1

YEROSHENKO, Ye. G.; DOLGINOV, Sh. Sh.; ZHUZGOV, L. N.; FASTOVSKIY, I. V.; ALEKSANYAN, L. M.

"Magnetic Investigations on the Electron 2 Satellite."

report presented at the 5th Intl Symp on Space Science, Florence, Italy, 12-16 May 64.

L: 2885-66 PSS-2/ENT(1)/FS(v)-3/FCC/EMA(d)/FAA(h) TT/OS/GW

ACCESSION NR: AT5023603

UR/0000/65/000/000/0336/0341

AUTHOR: Gringauz, K. I.; Dolginov, Sh. Sh.; Besrukikh, V. V.; Yeroshenko, Ye. G.; Zhuzgov, L. N.; Musatov, L. S.; Solomatina, E. K.; Fastovskiy, U. V. B+1

TITLE: Comparison of simultaneous measurements of magnetic field and positive ion flux within the Earth's magnetosphere recorded by the Elektron-2 satellite

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 336-341

TOPIC TAGS: space environment, ionospheric physics, electron density, ion density, earth magnetic field/Elektron 2 satellite

ABSTRACT: Measurements of charged-particle flux and magnetic field at a height of 6-11.6 R (R, Earth's radius) were made by Elektron-2. The particle trap used was capable of recording positive ion flux with ion energy in excess of the potential difference of the satellite with respect to its environment and electron flux with electron energy in excess of 100 ev. The magnetometer, with orthogonally arranged sensors, was capable of measuring the magnetic field in the range of $\pm 120 \times 10^{-8}$ erg

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Card 1/2

L 2885-66

ACCESSION NR: AT5023603

in each component direction. Its threshold was 2×10^{-5} erg. The satellite measurements, when compared with solar activity data in the form of K_p indexes recorded via ground observatories, show inconsistencies in the correlation between the variation of magnetic activity on the Earth's surface and the variation of the geomagnetic field intensity and charged particle flux as measured by the satellite. It is uncertain whether these observations can be explained by the solar wind penetrating the magnetosphere or by near-earth plasma due to charged particles accelerated by a yet unknown mechanism. Orig. art. has: 6 figures. [ND]

ASSOCIATION: none

SUBMITTED: 02Sep65

ENCL: 00

SUB CODE: ES,SV

NO REF SOV: 003

OTHER: 000

ATD PRESS: 1109

Card 2/2

L 23291-65 EWT(1)/FSF(h)/FSS-2/FS(v)-3/ENG(s)-2/FCC/ENA(d)/EEC(t) Po-4/Po-5/Po-4/
ACCESSION NR: AP5001986 Pae-2/P1-4 TT/ S/0020/64/159/006/1272/1273

GW
AUTHOR: Gringauz, K. I.; Dolginov, Sh. Sh.; Besrukikh, V. V.; Yero-
shenko, Ya. G.; Zhugov, L. N.; Musatov, L. S.; Solomatina, E. K.;
Fastovskiy, U. V.

TITLE: Observations using the artificial satellite Electron-2 of the
correlation between variations of the magnetic field and streams of
positive ions inside the terrestrial magnetosphere.

SOURCE: AN SSSR. Doklady, v. 159, no. 6, 1964, 1272-1273

TOPIC TAGS: artificial satellite, magnetometer, positive ion, geomag-
netic field, magnetosphere, radiation belt, flux intensity, negative
ion, theoretical field, apogee distance

ABSTRACT: The artificial satellite Electron-2, equipped with magne-
tometers and a trap for charged particles, recorded positive ions of
all energies, their fluxes with energies of more than 100 ev, and
measured all three components of the geomagnetic field in the magne-
sphere and at radiation belts. Recorded data showed a correlation
between the variations of the magnetic activity on the terrestrial

Card 1/2

L 22291-65
ACCESSION NR: AP5001986

surface and the intensities of fluxes of positive ions and the magnetic field far from the earth. This correlation was observed on quiet days and on days with magnetic disturbances. Numerous negative ion fluxes were recorded on magnetically quiet days. During this time, the magnetometer recorded a magnetic field of regular intensity although it exceeded the theoretical field by 20 γ. The maximum deflection from the theoretical field was detected at the apogee of the satellite. On 12 February 1964, all magnetic observatories on the earth recorded magnetic disturbances of sudden commencement while the trap in the satellite recorded positive ion fluxes exclusively of an intensity of $4 \cdot 10^{-10}$ amp. At this time the satellite was at apogee. The magnetometer recorded a rapid increase in the magnetic field. Orig. art. has: 4 figures. [8C]

ASSOCIATION: none

SUBMITTED: 15Sep64

NO REF SOV: 003

ENCL: 00

OTHER: 008

SUB CODE: ES,SV

ATD PRESS: 3173

Cerc 2/2

L 23434-66 FSS-2/EWT(1)/FCC TT/CW

ACC NR: AP6012835

SOURCE CODE: UR/0293/66/004/002/0302/0310

AUTHOR: Aleksanyan, L. M.; Yeroshenko, Ye. G.; Zhuzgov, L. N.;
Fastovskiy, U. V.

ORG: none

TITLE: Magnetometric apparatus of the Electron-2¹² space station

SOURCE: Kosmicheskaya issledovaniya, v. 4, no. 2, 1966, 302-310

TOPIC TAGS: magnetometer, magnetic field measurement

ABSTRACT: Two search-coil magnetometers¹² capable of independently measuring three components of the magnetic field in the outer radiation belt were mounted on Electron-2. One had a measurement range of $\pm 120 \gamma$, and the other, a range of $\pm 1200 \gamma$. A block diagram of the basic magnetometer is shown in the figure. It consists of a 2-kc signal generator with associated low-pass filter for suppressing the second harmonic, a tuned amplifier (voltage gain, 12×10^3 , bandwidth at 3 db, ± 100 cps) tuned to the second harmonic with associated input filter to attenuate the first and third harmonics by 40 db, a synchronous phase detector, and a d-c current amplifier (gain, 20). Two telemetry channels are utilized for each magnetic-field coordinate, one channel for positive values and the other for negative values. A diode gate

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2.

L 23434-66

ACC NR: AP6012835

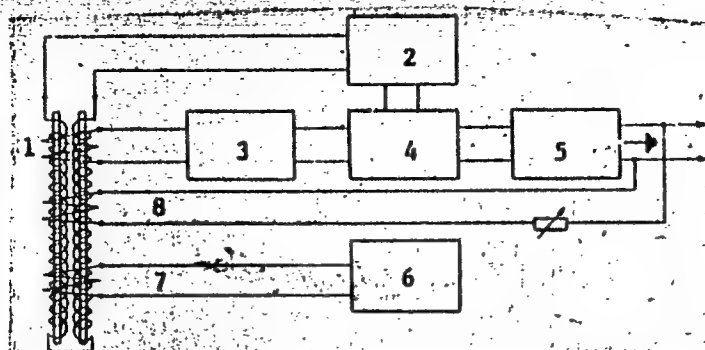


Fig. 1. Magnetometer

1 - Search coil; 2 - generator; 3 - amplifier;
4 - phase detector; 5 - dc amplifier; 6 - reference
voltage; 7 - calibration loop; 8 - feedback loop.

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ACC NR: AP6012835

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in the d-c amplifier unit diverts the information to the appropriate channel. The inclusion of a heavy voltage feedback confines the magnetometer nonlinearity to 2—3%. The sensitivities of two magnetometers are 2—3 γ and 20—30 γ ; the temperature stability measured at -3C, +18C, and +55C did not exceed 0.2 γ /C for the first and 0.7 γ /C for the second. A special unit for sensitivity calibration with the use of a reference voltage source is also included. The average error in measuring the scalar magnetic field was $\pm 4 \gamma$ and $\pm 40 \gamma$. The zero drift did not exceed 2—3 γ per day. The 14-v power supply for the magnetometers was stabilized by a P203 transistor and a D811 Zener diode. All other transistors used were the P103 type. Power consumption for each magnetometer was 2.2 w. "In conclusion, the authors are indebted to A. V. Klimovskiy, A. I. Konnov, Ye. Ye. Kanonidi, L. I. Ulanov, V. M. Agafonnikov, and V. G. Ryzhov for their active participation during the manufacturing, calibration, and testing of equipment." Orig. art. has: 1 formula and 4 figures. [BD]

SUB CODE: 09, 17/ SUBM DATE: 05Jun64/ ORIG REF: 003/ ATD PRESS:

4235

Card 3/3 *del*

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

18

Obtaining pure argon. V. I. Romanov and V. G. Fokhtovskii. J. Chem. Ind. (Moscow) 13, 930-2(1930); for app. is described for fractionating N₂-A mixts. under reduced pressure. H. M. Leicester

ASU-3LA METALLURGICAL LITERATURE CLASSIFICATION

SECOND ORDER

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSIES AND PROPERTIES INDEX																			
<p>Obtaining neon-helium mixtures. V. I. Romanov and V. G. Sidorovskii. <i>J. Chem. Ind. (U. S. S. R.)</i> 14, 105-8 (1967).—App. for fractionating a Ne-He-N mixt. is described. At 13-15 atm. Ne and He are quite sol. in liquid N. H. M. Leicester</p>																			
<p>ASB-56A METALLURGICAL LITERATURE CLASSIFICATION</p>																			
10000 SYNDICATE										10000 ONE ONLY ONE									
10000 04										10000 ONE ONLY ONE									

13C

2-1

Adsorption of neon and helium, V. G. Pavlovskii and L. A. Ginzburg (J. Chem. Ind. USSR, 1967, 16, 288-291).—The adsorption of Ne and He by active C has been studied between -195.7° and 0° at 20–600 mm. R. T.

ASH LEA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
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18

co

Krypton and xenon. V.G. Fastovskii J. Chem. Ind. (U.S.S.R.) 14, 1416-24(1937). Methods for the sepn. of these gases are described and discussed. Twenty-one references.

H. H. Leicester

ASD-51A METALLURGICAL LITERATURE CLASSIFICATION

ca

Preparation of pure neon. V. G. Favorskii and V. V. Verbitskii. *J. Applied Chem.* (U.S.S.R.) 11, 1001-1012 (in German, 1102) (1938).—The sepn. of Ne from a mixt. with He was investigated. The adsorption of Ne from the mixt. should be carried out by the dynamic method, i. e., by passing the mixt. previously freed from N₂, through a series of app. at a velocity which allows 10-12 min. contact of the gases with an adsorbent at 63-5°K. (at first) for the sepn. of the He fraction and at 77.3°K. for the adsorption of Ne. The Ne so obtained contained 0.5% of He and 1.5-1.0% of H₂. The app. and its use are described for the sepn. of Ne by the condensation method (using H₂). The app. for the adsorption method also is described.
A. A. Podgorny

ADD-56 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 12TH COLUMNS										12TH AND 1TH COLUMNS									
PROCESS AND PROPERTIES INDEX																			
<p>Gas balance. V. G. Pavlovskii and I. O. Olovich. <i>Zhurnal Fiz. Khim.</i> 57:17-18 (1983).—An app. for analyzing gases consists of a gas balance connected to a 3-way stop-cock for evacuating or filling the balance and also to 2 tubes filled with H_2 which serve to bring the balance to equilibrium rapidly and accurately. In analyzing the balance is thoroughly evacuated, gas of a known d, such as air, pure N_2 or C_2H_4, is admitted, the balance is brought to equilibrium and the pressure is noted on a manometer. The procedure is repeated with the gas under test. The beam of the balance has a permanent magnet while an electromagnet is placed outside the balance case. This device makes it possible to change the zero point of the beam easily when testing gases of widely differing d. The sensitivity of the balance is very high. B. Z. Kamich</p>																			
A.S.S.R. METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 12TH COLUMNS										12TH AND 1TH COLUMNS									
1ST AND 12TH COLUMNS										12TH AND 1TH COLUMNS									

An adsorption method for the extraction of krypton and xenon. I. V. O. Postorsky, *J. Gen. Chem.* (U. S. S. R.) 9, 1000-73 (1939); *Eng. C. A. J.* 32, 1078, 30, 3453* (S. R.) 9, 1000-73 (1939); *Eng. C. A. J.* 32, 1078, 30, 3453* (S. R.) 9, 1000-73 (1939). The gas was placed in 2 glass containers, from which it The gas was placed in a graduated buret, the pressure was measured, the gas passed over to an adsorber immersed in a Dewar flask containing a cooling mixt. (liquid N with alc.) and the pressure in the adsorber was measured. Before the expts. the app. was carefully evacuated, the silica gel the expts. the app. again evacuated. The vol. of the app. was preliminarily detd. by filling it with He. Pure O was obtained by heating KMnO₄ and A by rectifying the A-N mixt., and adsorption of traces of A by powd., metallic Ca. The d. of O was 1.1 and that of A was 1.270. To obtain pure Kr, the Kr-Xe mixt. contained was subjected to partial distn., to reduce the Xe content in the gas. The sepd. Kr had a d. of 2.85, which corresponds to Kr 100% and Xe 2%. The measurements were made at -85°, -90° and -120° and 0.100 mm. Hg pressure, by means of a Cu-constantan thermocouple placed directly in the adsorber. The temp. of the bathmen varied between 1 and 2° limits. A 2.2-g. sample of the adsorbent was used. Adsorption by silica gel can be used successfully for the sepn. of Kr, Xe and the concentration (O obtained from air contg. 0.1-1.2% of Kr and Xe). The results of the measurements are given graphically. At -85° the

adsorption of A and C₁ (but not of Kr) was linear. A lower temp. this relationship was much more complicated for all components of the mixt. (A, C and Kr). At the interval to 200-300 mg. Hg this relationship can be satisfactorily expressed by the parabolic equation $a = \alpha \times p^{1/2}$, where a is the adsorbed amt. of the gas, α the pressure over the adsorber and α and π are constns. The relation between a and p in the coordinate system $\lg a$ vs $\lg p$ is linear and makes possible a graphical det. of α and π . For the heavy, inert gases the adsorption equil. was reached very slowly (as contrasted to He and Ne). Pure fractions of air adsorption is effected at a temp. below single operation if adsorption is effected at of the other gas, the crit. temp. of one gas and above that of the other gas, and followed by desorption. The optimum temp. of the adsorption process was from -120° to -130° . A decrease of pressure increased the relative amt. of Kr in the adsorbed phase. Adsorption by silica gel is more reversible than that with activated charcoal at the same temp. The use of activated charcoal as a more active adsorbent permits an increase in the optimum temp. of adsorption and desorption. Six tables, 5 diagrams and 14 references are given.

W. K. Heilm

FASTOWSKIY, V. G.

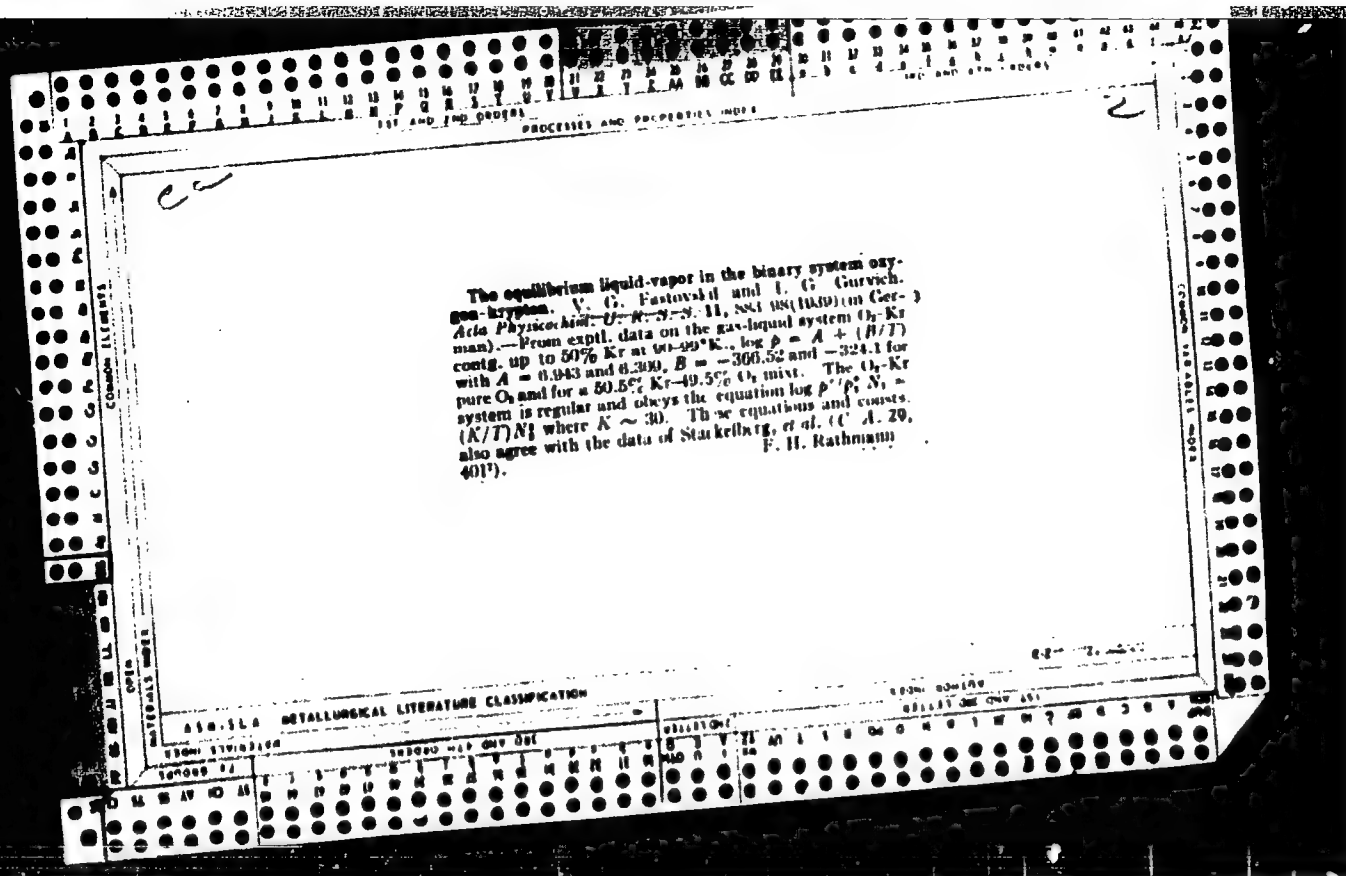
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THE SOLUBILITY OF GASES IN LIQUIDS AT LOW TEMPERATURES AND HIGH PRESSURES. I. THE SOLUBILITY OF HYDROGEN IN LIQUID NITROGEN AT TEMPERATURES OF 79.0-109.0°K AND PRESSURES UP TO 190 ATM. (Die Löslichkeit von Gasen in Flüssigkeiten bei niedrigen Temperaturen und hohen Drucken. I. Die Löslichkeit von Wasserstoff in flüssigem Stickstoff bei Temperaturen von 79.0-109.0°K und Drucken bis zu 190 atm.)

M. G. Gonikberg, W. G. Fastowsky, and J. G. Gurwitsch. Translated by D. J. Wright from *Acta Physicochim. U.S.S.R.* 11, 665-672 (1959). 21p. (TT-478)

An apparatus for the investigation of liquid-vapor equilibria using the circulation method is described. The solubility of hydrogen in liquid nitrogen at temperatures of 79.0, 98.1, 95.4, and 109.0°K and pressures up to 190 atm. and the hydrogen content in the gas phase at these temper-

atures and pressures were determined. It was shown that at 79.0 to 109°K the binary hydrogen-nitrogen system, taking the entire pressure interval into consideration, does not follow the laws of dilute solutions. In certain pressure intervals which depend on the temperatures, the hydrogen-nitrogen system can be regarded as a solution which obeys the thermodynamic equations for binary solutions. Negative values for the partial molar volumes of the hydrogen were obtained. Equations are suggested for the relationship between solubility of hydrogen in nitrogen and the temperature and pressure in the pressure and temperature interval under consideration, for the relationship between the hydrogen concentrations in the gas and liquid phases, and the pressure (for solubilities of hydrogen not over 20 to 22%) and for the relationship between the maximum value of the p-x curve and the temperature (above).



BC		B-T-8	
<p>Production of krypton and xenon. V. G. KAR. (J. Appl. Chem. Russ., 1939, 12, 675-685).— The industrial importance of Kr and Xe is stressed and methods of producing these gases are described. An experimental apparatus for the separation of Kr- Xe mixture, obtained as a by-product from liquid air distillation column, is described. The gases in the cap. fraction are freed from O₂ by burning in H₂. Hydrocarbons, CO₂, and H₂O, which are harmful im- purities if the gas is to be used for filling lamps, are removed in a purification train. Analysis of small amounts of these impurities is difficult and practical tests in lamps are recommended. A gravitation method for analyzing binary mixtures such as Kr-O₂, Xe-H₂, A-Kr has given good results. It is suggested that Kr and Xe should be recovered from circulating gases in the NH₃ synthesis process. D. G.</p>			
METALLURGICAL LITERATURE CLASSIFICATION			
1939-1940		1941-1942	
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1. FASTOVSKIY, V. G. ; GURVICH, I. G.
2. USSR (600)

"Research on the Equilibrium of the Liquid-Vapor of the Binary System Oxygen-Krypton," Zhur, Fiz. Khim. 13, No. 11, 1939. Moscow, All-Union Electrotechnical Inst. Received 9 July 1939.

9. [REDACTED] Report U-1615, 3 Jan. 1952

██████████

1. GONIKBERG, M. G.; FASTOVSKIY, V. G., GUNVICH, I. G.

2. USSR (600)

"The Solubility of Gasses in Liquids at Low Temperatures and High Pressures. I," Zhur. Fiz. Khim, 13, No. 11, 1939. Moscow, All-Union Electrotechnical Institute. Received 9 July 1939.

9. ████████ Report U-1615, 2 Jan. 1952.

FASFOVSKIY, V. G.

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THE SOLUBILITY OF GASES IN LIQUIDS AT LOW TEMPERATURES AND HIGH PRESSURES. 2. THE SOLUBILITY OF HELIUM IN LIQUID NITROGEN AT TEMPERATURES BETWEEN 78.0 AND 109.0°K AND PRESSURES UP TO 285 ATM. (Die Löslichkeit von Gasen in Flüssigkeiten bei niedrigen Temperaturen und hohen Drücken. 2. Die Löslichkeit von Helium in flüssigem Stickstoff bei Temperaturen von 78.0 bis 109.0°K und Drücken bis zu 285 atm.) M. G. Gonikberg and W. G. Fastovsky.

Translated by D. J. Wright from *Academy of Sciences U.S.S.R. 12, 67-72(1940). 8p. (TT-479)*

The solubility of He in liquid N was determined at 78, 80.1, and 109°K and pressures up to 285 atm. using the circulation method. The He content in the vapor phase generally exceeded 80 to 70%. It was shown that at temperatures from 78 to 109°K and between 50 and 300 atm., the binary He-N system follows the law of ideal solutions. The values of the Henry's law constants and the partial molar volumes of dissolved He were calculated at the above temperatures. (J.A.O.)

FASTOVSKIY, V [G]

241

THE SOLUBILITY OF GASES IN LIQUIDS AT LOW TEMPERATURES AND HIGH PRESSURES. 3. THE SOLUBILITY OF HYDROGEN IN LIQUID METHANE. (Die Löslichkeit von Gasen in Flüssigkeiten bei niedrigen Temperaturen und hohen Drücken. 3. Die Löslichkeit von Wasserstoff in flüssigem Methan). W. Fastowsky and M. Gonsky.

Translated by Dorothy J. Wright from *Acta Physicochim.* U.R.S.S. 12, 485-510 (1958). 7p. (TT-480)

The solubility of hydrogen in liquid methane and in vapor phase was determined at 80.3, 110.0, 122.0, and 127.0°K and at pressures from 180 to 230 atm. It was shown that, at 80.3 to 127.0°K and the pressures studied, the binary system H_2-CH_4 follows Kratochewsky's equation of dilute solutions. The values of the Henry's law constants and the partial molar volumes of dissolved hydrogen at temperatures of 80.3, 110.0, and 127.0°K were calculated. (auth)

A-U Electrotechnical Inst.

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Catalytic oxidation of low concentrations of acetylene
V. O. Pavlovskii and V. A. Mikhaylov. J. Applied Chem.
(U.S.S.R.), 19, 1800-81 (in French, 1961) (1960). — The
investigation was carried out for the purpose of developing
a method for the oxidation of impure gases, of C_2H_2 present
in equipment used for the rectification of liquid air and
concentrating oxygen. Among the catalysts (csm, MnO_2 ,
activated MnO_2 , electrolytic MnO_2 , NiO , CuO) ppds from
 CuSO_4 and two-component liposols used, all except NiO ,
 CuSO_4 and two-component liposols and vol. velocities of
were found very active at 180–200° and vol. velocities of
3000–30,000. For the csm, MnO_2 and ppd. CuO the
amt. of oxidation of C_2H_2 increases with increase in the
original concn. of C_2H_2 in the mixt. The apparent order
of the reaction for csm, MnO_2 at 180–200° is below one;
it approaches the unimolecular type with increase in temp.,
evidently because of decreased adsorption of the reacting
gases by the catalyst. At 180° the apparent order of the
reaction increases with increase of the original concn.
The catalytic oxidation of C_2H_2 in the presence of CuO is
accompanied at 100–200° by a chemisorption of C_2H_2 with
formation of the explosive Cu_2C_2 ; at higher temps.
(250–300°) and low concns. of C_2H_2 (below 0.1%) forma-
tion of Cu_2C_2 was not observed. Csm, MnO_2 is recom-
mended as a catalyst for use in csm. processes; the oxida-
tion should be effected at 200–250° and at a vol. velocity
of 2000–5000. See also references. A. A. Ruzhitskii.

COMMON ELEMENTS										COMMON VARIABLE MOI									
1ST AND 2ND ORDER										3RD AND 4TH ORDER									
PROCESSES AND PROPERTIES INDEX																			
<p>CA</p> <p>Obtaining technically pure oxygen, nitrogen and krypton-argon mixtures from air. V. G. Pastovskii. J. Chem. Ind. (U.S.S.R.) 17, No. 6, 10-12(1940); cf. C. A. 34, 4238, 4651. An air rectification app. is described. H. M. Leicester</p>																			
<p>ASR-55A METALLURGICAL LITERATURE CLASSIFICATION</p>																			
SOURCE										CLASSIFICATION									
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GONIKBERG, M. G. ; FASTOVSKIY, V. G.

Moscow

All-Union Electrotechnical Institute, (-1940-).

"The Solubility of Gases in Liquids at Low Temperatures and High Pressures," Part IV;
"The Solubility of Helium in Liquid Methane at 90.3 Degrees K and 106.0 Degrees K and
Pressures at to 160 Atmospheres."

Zhur. Fiz. Khim., Vol. 14, No. 8, 1940.

FASTOVSKIY, V. G.

Krypton and xenon. Moskva, Gos. energ. izd-vo, 1941. 116 p. (Trudy Vsesoiuznogo elektritekhnicheskogo instituta, vyp. no. 47) (51-45683)

QD181.K6F3

6. 16

Solubility of solid methane in liquid nitrogen and oxygen. V. G. Fastovskii and J. A. Krestinski (*J. Phys. Chem. Russ.*, 1941, 15, 825-831) -- The mol. fraction N of CH_4 in its saturated solutions in N_2 between 70° and 78° K and in O_2 between 68° and 74° K satisfies the equations $\log N = 1.34078 - 120/T$ and $\log N = 1.07088 - 85.22/T$ respectively. J. J. H.

MAITRELL, V. G.; KIMMELT, M. A.

"The Solubility of Argon in Liquid Oxygen", Zhur. Fiz. Khim. 16, Nos. 3-4, 1942.

Moscow, All-Union Electrical Engineering Institute. Received 24 April 1941.

Report U-1523, 24 Oct. 1951.

3243. METHANE. Pastovskii, V. G. (Moscow; Gosudarstvennoe Nauchno-
tekhnicheskoe Izdatel'stvo Neftyanoi i Gorno-toplivnoi Literatury,
1947, 154pp; Brown's Directory of American Gas Companies, 1947,-
1948 ed; New York: Moore-Robbins Publ. Co., 1947, 30; Chem. Abstr.,
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ТАБЛИЦА 1

Separation of gas compounds

Moskva, Gos. izd-vo tekhn.-teoret. lit-ry, 1947. 359 p. (49-29350)

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Translation - D 180564, 23 Feb 55